



Material Declaration Sheet

Vishay Inter-technology

Date: 1/28/2022

Part / Product Family Details

Part / Family Series	RoHS Compliance Status	RoHS Compliance Date Code	Total product Weight (mg)	Value Range	Product Type	Manufacturing Location	Number of Exemptions Used
CRCW0201 e3 Series	YES WITH EXEMPTION	16-Oct-2004	0.14303939	All R values	Resistor	Vishay BCcomponents Revschlag	1

Technical Information

Terminal Plating / Grid Array Material	Terminal Base Alloy	JESD-97 Pb-Free Material Code Marking	J-STD-20D MSL Rating	Reflow Peak Process Body Temperature	Reflow Maximum number of cycles	Reflow Max.Time at Peak Temperature (sec)	Soldering Compatibility (SnPb/Pb-Free)
Sn	Other	e3	1	260 °C	3	40	Backward & Forward

Material Composition

Homogenous Material Name	Material Classification	Substance Name	CAS number	Weight of Substance (mg)	With respect to Homogenous Material		% with respect to Total Product Weight	RoHS Exemptions Used
					%	ppm		
Ceramic substrate	Ceramics / glass	Aluminium oxide	1344-28-1	0.07982				
				0.07663	96.00	960000	53.57	0 - None
		Magnesium oxide	1309-48-4	0.00080	1.00	10000	0.56	0 - None
		Silicon dioxide	7631-86-9	0.00239	3.00	30000	1.67	0 - None
EP-QD-20	Other duromer			0.00336				
		Epoxy resin	25068-38-6	0.00279	83.04	830357	1.95	0 - None
		Silicon dioxide	7631-86-9	0.00057	16.96	169643	0.40	0 - None
Glass electrical contact	Ceramics / glass			0.00396				
		Lead Silicate	10099-76-0	0.00277	69.95	699495	1.94	7(c)-I
		Ruthenium oxide	12036-10-1	0.00119	30.05	300505	0.83	0 - None
Glass enamel	Ceramics / glass			0.00208				
		Glass w/o declarable substances	65997-17-3	0.00208	99.90	999000	1.45	0 - None
		Miscellaneous	System	0.00000	0.10	1000	0.00	0 - None
Nickel chromium alloy	Nickel alloys			0.01024				
		Chromium	7440-47-3	0.00205	20.02	200195	1.43	0 - None
		Nickel	7440-02-0	0.00819	79.98	799805	5.73	0 - None
Nickel plating	Nickel alloys			0.01736				
		Miscellaneous	System	0.00002	0.10	1000	0.01	0 - None
		Nickel	7440-02-0	0.01734	99.90	999000	12.12	0 - None
Silver electrical contact	Other special metals			0.00335				
		Bismuthous oxide	1304-76-3	0.00042	12.40	124011	0.29	0 - None
		Copper oxide	1317-38-0	0.00024	7.30	73009	0.17	0 - None
		Nickel	7440-02-0	0.00024	7.30	73009	0.17	0 - None
		Silver	7440-22-4	0.00244	73.00	729971	1.71	0 - None
Silver layer	Other special metals			0.00551				
		Miscellaneous	System	0.00001	0.10	1000	0.00	0 - None
		Silver	7440-22-4	0.00550	99.90	999000	3.85	0 - None
Sn99.9	Other special metals			0.01736				
		Miscellaneous	System	0.00002	0.10	1000	0.01	0 - None
		Tin	7440-31-5	0.01734	99.90	999000	12.12	0 - None

EU-RoHS Directive-2011/65/EU MCV of 0.1% by mass (1000 PPM) in homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE) and MCV of 0.01% by mass cadmium

Exemption Used 7(c)-I - Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound

Note - (i) All information is based on data received from our vendors & subjected to change without prior notice.
(ii) Substance weight are derived from MSDS.